

3rd Semester	RML3C001	Geology-I	L-T-P 3-0-0	3 CREDITS
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Module - I (10 hours)

Mineral Deposits: Classification of mineral deposits, Process of formation of mineral deposits- Magmatic concentration, Hydrothermal, Residual and Mechanical concentration, contact metasomatism, Oxidation and supergene sulphide enrichment, sublimation, Evaporation and Metamorphism.

Module – II (10 hours)

Uses: Mineralogy, mode of occurrence, genesis and Indian distribution of ore deposits viz., Iron, Manganese, chromium, Aluminium, Copper, Lead and Zinc, Radioactive minerals.

Module – III (12 hours)

Mineral resources: Brief idea about mineral resources of India: Geographical Distribution and reserves, Mining methods. Crystal systems- all normal classes. Petrology- Brief description of Igneous, Sedimentary & Metamorphic rocks, Genesis of common rocks and Minerals.

Module – IV (07 hours)

Mineral Chemistry: Geochemical differentiation, geochemical classification of elements, isomorphism polymorphism, geochemical cycle.

Module –V (06 hours)

Mineral Economics: Sampling, assaying, elementary idea on drilling and mining methods.

BOOKS:

- Text Book of Geology – P.K.Mukherjee
- Text Book of Geology- G.B. Mahapatra
- Parbin Singh. Geology for Engineers, IBH Publications, N. Delhi. 1991.
- Arthur Holesess, Principles of Physical Geology, Thomas Nelson and Sons, USA,1964.
- Ford, W.E. Dana’s Textbook of Minerology (4th edition), Wiley Eastern Ltd., N. Delhi, 1989.
- Element of Petrology-Tyrell
- Structural Geology- Marland P. Billings
- Physical Geology – Sainder Singh